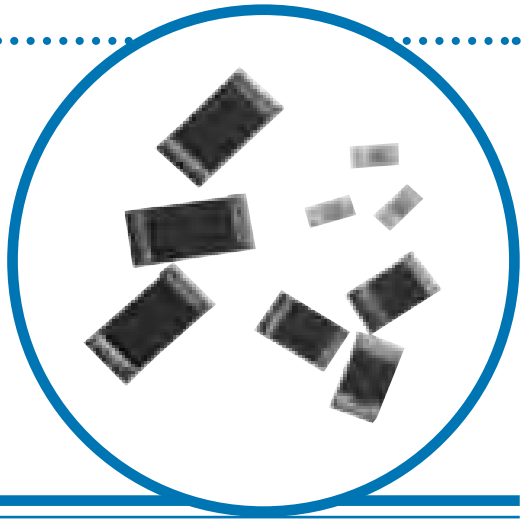
High Temperature Chip Resistor

HTCR Series



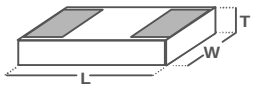
- **High temperature operation to 250°C**
- **For gold wire bond (G type)**
- **For conductive adhesive (G, P & EW types)**
- **For soldering (F type)**
- **Non-magnetic (G, P & EW types)**
- **Range 0805 to 2512 at 1R0 to 10M**
- **RoHS compliant**

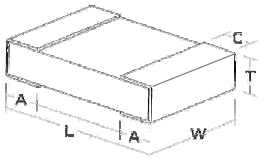
Electrical Data

Size		**0805**	**1206**	**2010**	**2512**
Power @230°C (G&P only)	W	0.063	0.125	0.25	0.5
Power @155°C	W	0.1	0.2	0.5	0.75
Power @70°C	W	0.125	0.25	0.625	1
Resistance range	ohms	1R0 to 10M			
Tolerance	%	1, 5			
LEV	V	150	200	400	500
TCR	ppm/°C	<10R:200 ≥10R:100			
Operating temperature	°C	F type -55 to +200, EW type -55 to +225, G&P type -55 to +250			
Thermal Impedance	°C/W	220	160	75	40
Values		E24 or E96 preferred - other values to special order			

Physical Data (All dimensions in mm and nominal weight in g)

	L	**W**	**T**	**A & C**	**Wt.**	**G & P types**	**EW & F types**
0805	2.0 +0.2/-0.15	1.25 ±0.15	0.5 ±0.15	0.4 ±0.2	0.009		
1206	3.15 +0.2/-0.2	1.6 ±0.15	0.5 ±0.15	0.45 ±0.2	0.020		
2010	5.0 ±0.2	2.5 ±0.2	0.65 ±0.15	0.5 +0.25/-0.3	0.036		
2512	6.25 ±0.25	3.2 ±0.2	0.65 ±0.15	0.6 +0.25/-0.3	0.055		





Wrap-around terminations (3 faces)

Construction

Planar gold G type or PtAg P types: Electrodes, resistor material and overglaze are printed onto an alumina substrate. The resistors are laser trimmed to the required value and protected. The gold terminations are suitable for wire bonding and both types are suitable for attachment with conductive adhesive.
Wraparound EW type: Thick-film PtAg electrodes, resistor material and overglaze are printed onto an alumina substrate. The resistors are laser trimmed to the required value and protected. The terminations are wraparound coated with a polymer Ag material and are suitable for attachment with conductive adhesive.
Wraparound F type: These are made as the EW type then plated with a nickel barrier and 100% tin plating and are suitable for soldering.

Marking

The components are not marked; all data is printed onto the packaging.

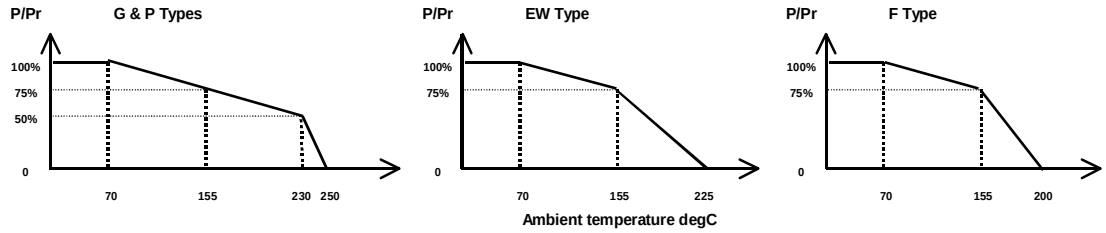
Solvent Resistance

The component is resistant to all normal industrial cleaning solvents suitable for printed circuits.

Performance Data

		Maximum
Load at rated power (1000hrs at 155°C and 70°C)	ΔR	2% + 0.01Ω
Derating from rated power at 70°C		See Derating Curves below
Short term overload	ΔR	1% + 0.01Ω
Dry heat (1000hrs at 250°C)	ΔR	2% + 0.01Ω
Damp heat steady state (56 days, 40°C, ≥90% RH)	ΔR	1% + 0.01Ω
Climatic	ΔR	1% + 0.01Ω
Temperature rapid change (5 cycles -55ºC to +250ºC)	ΔR	1% + 0.01Ω

Derating Curves



Packaging

0805 and 1206 HTCR series resistors are supplied on 8mm carrier tape and 7 inch reels as per IEC 286-3, quantity per reel; 3000.
2010 and 2512 HTCR series resistors are supplied on 12mm carrier tape and 7 inch reels as per IEC 286-3, quantity per reel; 2010: 3000pcs; 2512: 1800pcs.

Ordering Procedure

Example: HTCR1206 in gold planar format at 10 kilohms and 1% tolerance packed in tape.

HTCR1206G – 10K F T3

Type

Terminations

G	Gold planar	Wire bond / adhesive
P	PtAg planar	Adhesive
EW	Polymer Ag wraparound	Adhesive
F	Ni Barrier & Sn plated wraparound	Solder

Value (use IEC62 code)

Tolerance (use IEC62 code)

F	1%
J	5%

Packing

T3	Tape	0805, 1206, 2010	up to 3000/reel	Standard
T18		2512	up to 1800/reel	